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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,144	07/18/2003	Melissa Wiedemann	017750-420	1878
7590	10/04/2007		EXAMINER	
PATRICK C. KEANE			RASHID, DAVID	
BURNS, DOANE, SWECKER & MATHIS, L.L.P.				
P.O. Box 1404			ART UNIT	PAPER NUMBER
Alexandria, VA 22313-1404			2624	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/622,144	WIEDEMANN ET AL.
	Examiner	Art Unit
	David P. Rashid	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
 - 4a) Of the above claim(s) 10-49 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 20 November 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Amendments

1. This office action is responsive to claim amendment received on 9/10/2007.

Election/Restriction

2. Election was made **with** traverse of **Species I** (i.e. **claims 1 – 9**) by applicant in the reply filed on 9/10/2007 is acknowledged. The traversal is on the grounds that there are two criteria for a proper restriction requirement between patentably distinct inventions: (1) the invention must be independent or distinct as claimed; and (2) there must be a **serious burden** on the Examiner if restriction is not required. This is not found persuasive because Species I – VII have all been found to be classified in separate sub-classes (and thus each Species being distinct as claimed), which would be a serious burden on the Examiner to examine if the restriction is not required.

The requirement is still deemed proper and is therefore made FINAL.

3. **Claims 10 – 49** are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected **Species II – VII**, there being no allowable generic or linking claim.

Specification

4. The following is a quote from 37 CFR 1.72:

(b) A brief abstract of the technical disclosure in the specification must commence on a separate sheet, preferably following the claims, under the heading "Abstract" or "Abstract of the Disclosure." The sheet or sheets presenting the abstract may not include other parts of the application or other material. The abstract in an application filed under 35 U.S.C. 111 may not exceed 150 words in length. The purpose of the abstract is to enable the United States Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure.

5. It has been noted that the abstract is less than 50 words in length and it is suggested to keep the abstract within the range of 50 – 150 words in length.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1 – 3 and 6** are rejected under 35 U.S.C. 102(b) as being anticipated by Bonneau et al. (US 6,002,794 A).

Regarding **claim 1**, Bonneau discloses a method for identifying objects (the features/objects in element 201 of FIG. 2) in an image (FIG. 2, element 201) comprising: receiving an image (FIG. 5, element 519) with a first resolution (resolution of Scale 1); processing the image at a second resolution (FIG. 5, elements 517, 503; resolution of Scale 2) to identify an object (the objects identified in element 505 of FIG. 5);

processing the image at the first resolution using the identified object to identify another object (FIG. 5, element 507 identifies another object such as the hair or mouth; FIG. 3 using “quadtree segmentation”), wherein the first resolution is higher than the second resolution.

Regarding **claim 2**, Bonneau discloses the method of claim 1, further comprising:

processing the image at a third resolution (FIG. 5, element 501; resolution of Scale 3) to identify yet another object (the object identified in element 501 of FIG. 5), wherein the yet another object is employed in the identification of the object (the objects identified in element 505 of FIG. 5) and the another object (FIG. 5, element 507 identifies another object such as the hair or mouth; FIG. 3 using “quadtree segmentation”), wherein the second resolution is higher than the third resolution.

Regarding **claim 3**, Bonneau discloses the method of claim 2, further comprising:

downsampling the image from the first resolution to the second resolution (FIG. 2, elements 252, 254, 256 wherein downsampling from f by a factor of 4 is equivalent to downsampling from $f/2$ by a factor of 2 since all downsampled images originate from same image 201 and frequency 252); and

downsampling the image from the second resolution to the third resolution (FIG. 2, elements 256, 258 wherein downsampling from f by a factor of 8 is equivalent to downsampling from $f/4$ by a factor of 2 since all downsampled images originate from same image 201 and frequency 252).

Regarding **claim 6**, Bonneau discloses the method of claim 1, further comprising:

determining whether the object and the another object are desired objects based upon a context associated with the image (FIG. 10, element 1009; Col. 20, line 50 – Col. 21, line 28).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 4 – 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonneau et al. (US 6,002,794 A) in view of Hsu (US 5,631,970 A).**

Regarding **claim 4**, while Bonneau discloses wherein the processing is performed as a function of a type of facial feature in the image, Bonneau does not teach wherein the function is of a type of terrain.

Hsu discloses a process for identifying simple and complex objects from terrain types (FIG. 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the facial feature type of Bonneau to be terrain type as taught by Hsu “for identifying and/or extracting an object or group of objects from one or more fused images and map data.”, Hsu, Col. 1, lines 9 – 10.

Regarding **claim 5**, while Bonneau discloses wherein the type of facial feature is identified using a priori information (“stored information” in Col. 20, lines 50 – 52) and a gray level co-occurrence identification (Bonneau discloses that the image could be grey-scale (Col. 1, lines 42 – 44) with high frequency thresholds below a certain grey scale level (Col. 4, lines 12 –

13) which all suggest a “gray level co-occurrence identification”), Bonneau does not teach wherein the type is of a terrain type.

Hsu discloses a process for identifying simple and complex objects from terrain types (FIG. 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the type of Bonneau to be terrain type as taught by Hsu “for identifying and/or extracting an object or group of objects from one or more fused images and map data.”, Hsu, Col. 1, lines 9 – 10.

Regarding **claim 7**, while Bonneau discloses wherein the object is a facial feature, Bonneau does not teach wherein the object is a river.

Hsu discloses a process for identifying simple and complex objects that includes wherein the object to be identified is a river (Col. 5, lines 57 – 59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the object to be identified as taught by Bonneau to be a river as taught by Hsu “for identifying and/or extracting an object or group of objects from one or more fused images and map data.”, Hsu, Col. 1, lines 9 – 10.

10. **Claims 8 – 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonneau et al. (US 6,002,794 A) in view of Eppler (US 6,084,989 A).

Regarding **claim 8**, while Bonneau discloses the method of claim 2, wherein step of processing the image at the third resolution comprises:

identifying portions of the image containing a face outline (face outline in element 501 of FIG. 5);

and identifying portions of the image containing other potential face outlines (Scale 3 “Domain Blocks” algorithm suggests other face outlines of the same size will also be identified), wherein if portions of the image are identified which contain a face outline or other potential face outlines, identifying the face outline or other potential face outlines as the yet another object (refer to references/arguments cited in claim 2), Bonneau does not teach wherein the face outline are clouds and wherein other face outlines are bodies of water.

Eppler discloses a method for automatically determining the position of landmarks in images from satellite-based imaging systems (FIG. 1) wherein clouds are eliminated by upsampling an image and thus increasing the resolution such that the clouds are no longer visible (Col. 3, lines 10 – 21). In effect, upsampling to eliminate the clouds identifies the clouds in a “lowest resolution group”.

Eppler also describes being a higher resolution to the image once an island or lake has been identified, thus placing a body of water in a “lowest resolution group” (Col. 13, lines 16 – 26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the facial feature and other facial features of Bonneau to include clouds and bodies and water respectively as taught by Eppler, and wherein if portions of the image are identified which contain clouds or bodies of water, it would have been obvious to one of ordinary skill in the art at the time the invention was made for identifying the clouds or bodies of water as the “lowest resolution group” as taught by Eppler to be the yet another object as taught by Bonneau

so that to “provide[s] for a system and method that processes a digitized image generated by a satellite-based imaging system and generates error values indicative of the misregistration between the actual position of the landmarks in the digitized images and their desired position. The error values are then used to adjust the optical line of sight of the imaging system to produce optimum registration.”, Eppler, Col. 1, line 66 – Col. 2, line 5 as well as “the landmark mask and the upsampled image patch containing the landmark are processed using an image enhancement algorithm that increases the contrast and robustness of the images by converting pixel gray scale values into likelihood ratios, that is whether the each pixel is part of the landmark or part of the land or water surrounding the landmark. Using the image enhancement algorithm, the computed likelihood ratios along with the landmark mask are processed by the matching algorithms to generate the offset errors and match figure of merit.”, Eppler, Col. 2, lines 40 – 49.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

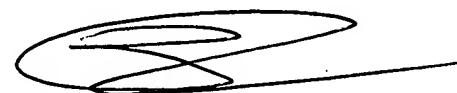
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/David P. Rashid/
Examiner, Art Unit 2624

David P Rashid
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